

AMENDMENTS TO THE CLAIMS

1. (presently amended) Hydrogel composition comprised of a mixture of

(A) a water soluble or water dispersible hydrophilic polymer in an aqueous system substituted with oligomers or co-oligomers, wherein the oligomers or co-oligomers are at least partly formed from chiral monomers, and

(B) a water soluble or water dispersible hydrophilic polymer in an aqueous system substituted with oligomers or co-oligomers ~~which~~, wherein the oligomers or co-oligomers are at least partly formed from chiral monomers with a chirality that is opposite to that of said monomers in mixture (A),

such that the chiral part of the oligomers or co-oligomers in mixture (B) are in essence complementary to that of said groups of mixture (A), where the groups on the polymers from mixture (A) interact noncovalently with the groups from mixture (B).

2. (previously presented) Hydrogel according to claim 1 in which the said oligomers or co-oligomers of mixtures (A) or (B) are chosen from the group comprising homo-oligomers of D-lactic acid, random co-oligomers of D-lactide/ ϵ -caprolactone, di- and triblock blends of D-rich poly (lactic acid), poly (D-lactide-co-glycolide), di- and triblock co-oligomers of poly (ethylene glycol)/poly (D-lactic acid), poly (methyl methacrylate), poly (α -methyl- α -ethyl- β -propiolactone), poly (tert-butylethylene oxide), poly (tert-butylethylene sulfide), poly [β -(1,1-dichloropropyl)- β -propiolactone], poly(α -benzyl glutamate), poly(methylbenzyl methacrylate), poly(vinyl-N-butylpyridinium bromide), poly (sodium styrenesulfonate), poly (tert-butylthiirane), poly (α -methylbenzyl methacrylate), poly [β -(1,1-dichloroethyl)- β -propiolactone], and mixtures thereof; and said monomers of the other mixture are formed by the enantiomers of said monomers of the first mixture.

3. (previously presented) Hydrogel composition according to claim 1, in which a substantial part of said groups of mixture (A) are linked to said polymer of mixture (A) through a moiety which is chemically different from the corresponding linking moiety on the groups of mixture (B).

4. (original) Hydrogel composition according to claim 3, in which one of said moieties in mixture (A) or (B) is a hydroxyl group and the moiety in the other group is a carboxylic acid.

5. (previously presented) Hydrogel composition according to claim 3, in which the oligomeric groups are derived from bifunctional oligomers that form parallel stereocomplexes.

6. (previously presented) Hydrogel composition according to claim 1, in which the water soluble or water dispersible polymer is chosen from the group consisting of dextran, starch, cellulose derivates, albumin, lysozyme, poly(aminoacids), poly(lysine) and related copolymers, poly(glutamic acid) and related copolymers poly (meth)acrylates)/ (meth)acrylamides), poly(vinylalcohol), poly(ethylene glycol), water soluble polyphosphazenes, or mixtures thereof.

7. (previously presented) Hydrogel according to claim 1, in which there is a linking group between the water soluble or water dispersible polymer and the oligomeric or co-oligomeric group, which linking group comprises a hydrolysable group.

8. (previously presented) Hydrogel according to claim 1, in which the average chain length of the oligomeric or co-oligomeric groups is sufficiently low to render the polymer soluble or dispersible in water.

9. (previously presented) Hydrogel composition according to claim 1, where the average degree of substitution of the water dispersible polymer with oligomeric or cooligomeric groups is sufficiently high to obtain a network in which the crosslinks are formed by physical interaction of the water soluble or water dispersible polymers.

10. (previously presented) Hydrogel composition according to claim 1, where the average degree of substitution of the water soluble or water dispersible polymer with oligomeric or co-oligomeric groups is sufficiently low to render said polymer structure soluble or dispersible in water.

11. (previously presented) Hydrogel composition according to claim 1, in which the average degree of substitution is from 3 - 25.

12. (previously presented) Hydrogel composition according to claim 1, in which the oligomeric or co-oligomeric groups of one mixture comprise poly(D-lactic acid) and the oligomeric or co-oligomeric groups of the other mixture comprises poly(L-lactic acid) both with an average chain length of 7-15 monomers.

13. (previously presented) Hydrogel composition according to claim 1, in which all oligomeric or co-oligomeric groups have equal length.

14. (previously presented) Hydrogel composition according to claim 1, in which the oligomeric or co-oligomeric groups are grafts.

15. (previously presented) Process for the preparation of a hydrogel comprising:

- a) polymerization, optionally in the presence of a suitable initiator, of a monomer, where the monomer of one mixture is the enantiomer of the monomer of the other mixture,
- b) reacting each product of step a) with a suitable coupling compound and a water soluble or water dispersible polymer to form two mixtures of a water soluble or water dispersible hydrophilic polymer substituted with oligomers or co-oligomers at least partly formed from chiral monomers of opposite chirality, and
- c) mixing said two mixtures in an aqueous system such that the groups on the polymers interact noncovalently.

16. (original) Process according to claim 15, in which the suitable initiator contains a primary or secondary hydroxyl group.

17. (previously presented) Process according to claim 16, in which an active ingredient is added before or in step c).

18-20. (canceled)

21. (previously presented) Process for the preparation of a hydrogel as defined in claim 1 in the form of microspheres, which process comprises the formation of a two phase system, optionally in the presence of a releasable compound, by choosing two of said water soluble or water dispersible polymers such that they are incompatible; from which two phase system said hydrogel is formed.

22. (previously presented) Process for the preparation of a hydrogel as defined in claim 1 in the form of microspheres which comprises spray drying of at least one water soluble polymer according to any one of the preceding claims, optionally in the presence of a releasable compound.

23. (previously presented) Microspheres obtainable by the process according to claim 21 which are injectable.

24. (previously presented) A method for drug delivery comprising administering the hydrogel composition of claim 1.

25. (previously presented) The method of claim 24, wherein said administering is *in vitro*.

26. (previously presented) The method of claim 24, wherein said administering is *in vivo*.